RESOURCE MANAGEMENT

Five Year Forest and Range Resource Program 1990–1995

Province of
British Columbia
Ministry
of Forests

FIVE YEAR

FOREST AND RANGE RESOURCE PROGRAM

1990-1995

Submitted to the Legislative Assembly

in Accordance with

Section 9 of the **Ministry of Forests Act**

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Ministry of Forests

Honourable Claude Richmond, Minister

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Part 1: INTRODUCTION

This report presents the programs of the Ministry of Forests. Its purpose is to describe for the Legislative Assembly the government's intentions regarding the management of British Columbia's forest and range resources over the next five years, from April 1, 1990 through March 31, 1995.

This resource program is one of three reports on forest and range management required by the **Ministry of Forests Act**: A resource analysis is published periodically, with at most ten years between analyses; a resource program is updated annually; and, an annual report monitors progress.

The resource program is based, in part, on opportunities revealed in the **1984 Forest and Range Resource Analysis**. Next year's annual report will record and evaluate the performance of the ministry in implementing this program.

These three documents provide a continuing public record of the ministry's goals and performance in forest and range management. Their purpose is to promote public awareness and understanding of the management of British Columbia's forests and rangelands. All three reports are available from Crown Publications Inc., 546 Yates Street, Victoria, British Columbia.

ORGANIZATION OF THE REPORT

Part 2 of this report discusses the underlying program themes which the Ministry of Forests is emphasizing in its budget for 1990/91. These themes are expected to be of continuing importance throughout the five years covered by this report.

Part 3 describes the ministry's programs and the role of the private sector in implementing the programs.

Part 4 provides a summary.

Part 2: PROGRAM THEMES

PUBLIC UNDERSTANDING AND TRUST

Visible Staff

Stewardship of the Crown's forests is, ultimately, the responsibility of government. The Ministry of Forests must therefore monitor management activities closely and visibly. In recent years, concern has been expressed that the ministry does not exercise sufficient control over the forest industry's activities in the forests.

The ministry is addressing this concern on two fronts. First, the ministry is reviewing its capacity to monitor field operations. Following completion of this review, expected in 1990/91, the ministry will take steps to increase the effectiveness of its field monitoring activities.

Second, the ministry intends to make its field staff more recognizable, by creating a stronger visual identity. This will be achieved through wider use of the British Columbia Forest Service logo on signs and vehicles, and may include easily recognized apparel for field staff.

The Forest Resources Commission

The Forest Resources Commission (FRC) was established by the Minister of Forests in June, 1989, in response to concerns about forest management in British Columbia, and increasing calls for a royal commission on forestry. By establishing a permanent commission with full powers of inquiry, the government ensured that a broad range of topics can be thoroughly addressed over time. The initial four tasks assigned to the FRC are to:

* provide a better understanding of the full range of values that forests represent to British Columbians;
* review the effectiveness of tree farm licences as a form of tenure;
* recommend ways to improve public participation in forest planning and management; and,
* review and recommend ways to improve forest management practices, focussing on clearcutting and associated forest practices and their impacts.

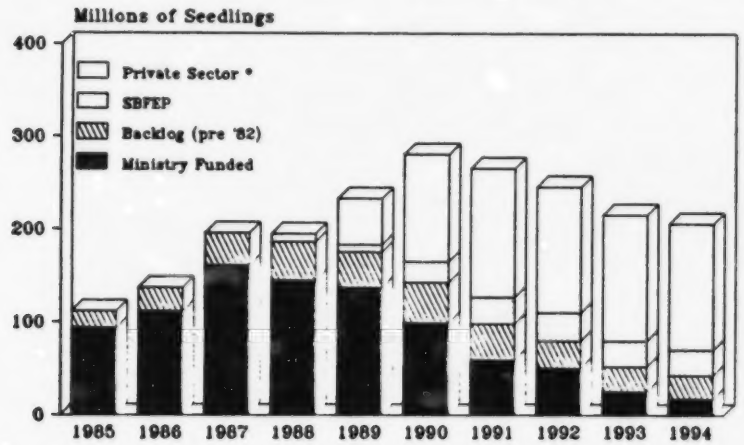
The FRC's first set of public hearings, focussed on the these tasks, is already underway. Recommendations from these hearings are expected in the Fall of 1990.

FOREST RENEWAL

Reforestation

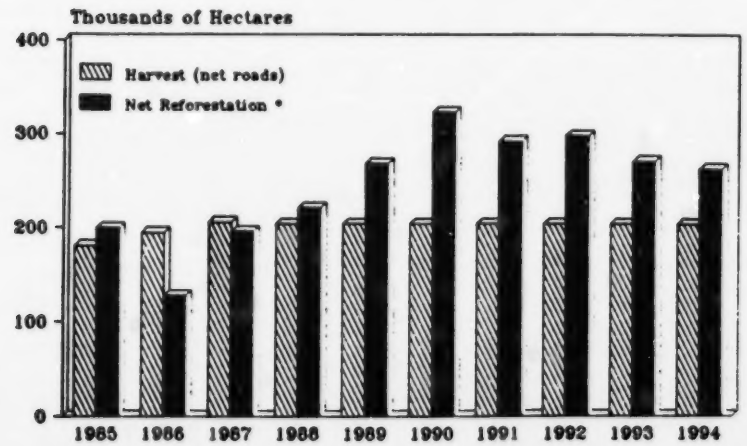
Reforestation goals have increased dramatically in recent years. As shown in the first chart below, planting has increased to 235 million seedlings in 1989, a more than twofold increase in only four years. Over the next five years, planting levels are estimated to average 245 million seedlings annually. Planting levels are expected to decrease gradually and stabilize, by the year 2000, at approximately 175 million seedlings annually. This decrease is due to the expected completion of reforestation of areas harvested before 1987. Goals for the next five years are detailed in Part 3 of this report.

Planting On Crown Lands



* Private Sector figures are estimates.

Reforestation on Crown Lands



* Natural Regen + Planting - Failures

Each year, forest lands are denuded by a combination of timber harvests and losses to fire and pests. Concurrently, other forest lands are reforested (with commercially useful trees) through a combination of planting and natural regeneration. As shown in the second chart opposite, the level of reforestation has exceeded the level of harvesting for the past two years. Over the next five years, as areas harvested before 1987 are reforested, the annual areas reforested are expected to significantly exceed the areas harvested, By the year 2000, the areas reforested are expected to be in balance with the areas harvested and lost to fire and pests.

Results of the Forest Resource Development Agreement

The $300 million, five year Canada-British Columbia Forest Resource Development Agreement (FRDA) was designed to reforest the backlog of not satisfactorily restocked (NSR) lands; improve forests through incremental silviculture activities such as brushing, juvenile spacing and fertilizing; and, support forestry research.

Total accomplishments, based on actual figures for the first four years (1985/86 to 1988/89, inclusive) plus estimates for the last year (1989/90), are shown below:

Surveys and Silvicultural Prescriptions	857 300 ha
Site Preparation	105 200 ha
Planting	132 700 ha
Brushing, Weeding & Conifer Release	35 600 ha
Juvenile Spacing	58 200 ha
Fertilizing	44 600 ha

The increased forest growth resulting from these and other accomplishments is expected to support over 1,000 permanent jobs in British Columbia, more than double the number originally targeted. Another 31,000 short-term jobs (or about 10,000 person-years) were created. The agreement has ensured greater long-term stability for many British Columbia communities, by improving future timber supplies.

Future Agreements

The provincial government is negotiating with the federal government to continue the cooperative work begun under the FRDA. The Province has earmarked $89 million for new forest renewal initiatives in 1990/91, such as a replacement for the FRDA. These new initiatives will further eliminate the backlog of NSR lands on good and medium forest sites, and in other ways increase the productivity of the Province's forests.

RESOURCE STEWARDSHIP

Review of the Range Program

The Province's rangelands serve a wide variety of interests, from ranching and tourism (guides, packers and trail ride outfitters), to wildlife and general recreation. With increasing demands placed on the range resource, a review of how to best serve all parties became necessary.

An intensive Range Program Review began in April 1988 under the guidance of an interagency committee. A comprehensive report was released in October 1989, that proposed 12 strategic goals and made 32 recommendations for redirection of the program. The report makes recommendations on numerous administrative matters, planning, inventory, monitoring and research, and suggests greater emphasis on wise stewardship of the range resource.

The public's comments on the report are being considered in the preparation of a draft strategic plan for the Range Program by July 1990. This plan will also be distributed for public review, as will a discussion paper on legislation changes required to implement the proposed plan.

Old Growth Strategy

The status of British Columbia's old growth forests is increasingly controversial. Some of these forests are of great value and interest for various uses, from timber harvesting to recreation to preservation for scientific study.

The Ministry of Forests has initiated an ambitious project to develop a strategy for old growth forests. Through a consultative process involving numerous government agencies, public interest groups, forest industry representatives, the academic community, native groups and independent professionals, the ministry intends to develop a comprehensive draft strategy by March 1991. The strategy will articulate the values associated with old growth forests; identify research and inventory needs; and, recommend actions and policies.

Wilderness

Since 1987, the Ministry of Forests manages wilderness areas outside parks. To date, three wilderness areas have been designated under the **Forest Act**. The ministry issued a wilderness policy in December, 1989, and is now developing a system plan for wilderness study areas, based on inventories of wilderness values and proposals received from the public. Candidate areas will be assessed and ranked, and recommendations made to Cabinet for formal designation of selected areas. A wilderness management plan will be prepared for each designated wilderness area.

ECONOMIC DEVELOPMENT AND JOBS

Forest Development Planning

The ministry is modifying the process for assigning new major forest tenures. To ensure that non-timber resources are given full consideration, the process will include:

* increased scope of public hearings;
* an inter-ministry staff committee to review applications for forest tenures;
* review of the committee's recommendations by the Deputy Ministers Committee on Sustainable Development;
* direct linkage with the recently announced Major Project Review Process, if a new processing facility is involved, to ensure that all impacts of the proposed facilities are assessed and managed; and,
* a requirement for applicants to submit operational plans for review before the tenure is granted.

These changes will ensure that the creation of jobs in the forest sector does not cause greater job losses in other sectors; and, that any environmental impacts are assessed, and considered in the decision-making process and management plans.

Value-Added Products

The Ministry of Forests is actively encouraging the forest industry to produce more specialty products and remanufacture lumber to add value. By diversifying the range of products and adding more value to the timber harvested from the Province's forests, the industry will be able to serve a wider range of markets world-wide. This will lead to increased employment and greater community stability.

The production of more value-added products is being encouraged in several ways:

* The Small Business Forest Enterprise Program (SBFEP) was expanded in 1988, by making timber available to companies that produce value-added products, but did not have a long term supply of raw material.
* A new branch, the Industry Development Branch, has been created to work with the forest industry as it make the changes necessary to capitalize on emerging market opportunities.
* The forest products research institute, Forintek, has been given increased funds to solve technological problems for the value-added sector.

REVENUE MANAGEMENT

Government revenue from timber and other forest resources has increased fourfold since the new stumpage policy was introduced in October, 1987. Forest revenues account for more than half of the Province's natural resource revenues, approximately $711 million in 1989/90 and forecast at $716 million for 1990/91.

Revenue management is a high priority for the Ministry of Forests. New policies and business practices are being introduced to ensure fair, complete and timely collection of all forest revenues due the Crown. The ministry has already undertaken a number of actions to address concerns about the ministry's stumpage and royalty revenue system that were raised in the Auditor General's Annual Report 1989. Further steps are underway to reduce the risks of revenue loss identified in that report.

During 1990/91, the ministry will continue a major initiative, begun in 1989/90, to improve computer and administrative systems for tenure administration, scaling, billing and accounts receivable. These changes will significantly improve the ministry's revenue management over the next five years and beyond.

Part 3: PROGRAMS OF THE MINISTRY OF FORESTS

The Ministry of Forests' operations consist of two main programs, and are assisted by the private sector. The Forest and Range Resource Program is described in detail below, while the supporting Management Services Program and the role of the private sector are only described briefly.

FOREST AND RANGE RESOURCE PROGRAM

The Forest and Range Resource Program consists of eight main functions or programs, described below.

Integrated Resource Management Program

The purpose of the Integrated Resource Management Program is to ensure that all resource values are considered in the ministry's management of British Columbia's forests and rangelands, as required under section 4(c) of the **Ministry of Forests Act**.

The program includes the activities of the Integrated Resources Branch in Victoria, and range, recreation and resource planning personnel in the region and district offices.

Forecast expenditure in 1990/91 is $19 million.

The Integrated Resource Management Program consists of three subprograms: range, recreation and resource planning.

Range

The range subprogram provides stewardship, conservation, rehabilitation and enhancement of Crown provincial rangeland, 80% of which comprises land managed for timber production. Use of the range resource by livestock, wild ungulates, guide/outfitters, packers and others is integrated to minimize conflicts. The range component administers range tenures and recovers revenues from the ranching industry for the use of one million animal unit months (AUMs) of forage.

New initiatives, based on recommendations from the Range Program Review, were begun in 1989/90 to improve rangeland stewardship. Implementation will continue in 1990/91 and beyond. Major activities include increased planning, inventory, monitoring of range condition, research, weed control and forage enhancement. Investments will also be made in maintaining and building fences, water developments and other facilities, to achieve efficient resource use.

Recreation

The recreation subprogram has a twofold role of managing recreation resources (protecting present and future recreation values, including scenic landscapes, wilderness, and cultural and heritage landmarks) and managing their use, by providing safe, sanitary, socially acceptable and environmentally sound recreation facilities.

Goals for the next five years include:

* a comprehensive Recreation Program Review, followed by implementation of the review's proposed strategy and action plan;
* a comprehensive revision of the decade-old **Recreation Manual**;
* wilderness management, as described in Part 2 of this report;
* landscape management guidelines at the provincial and regional levels;
* completion of the recreation inventory, updating it on a five year basis, and loading it onto the ministry's geographic information system (GIS) database;
* completion of recreation corridor planning studies and review of the corridor program, as directed by the **1985 Recreation Corridors System Plan**;
* development of a demonstration forest program;
* maintaining a network of sites and trails that meets the public's needs;
* meeting the public's need for information on recreation opportunities, forest etiquette and safe use of forest lands; and,
* various surveys and studies of recreation values, demand for recreation opportunities, landscape preferences, and the satisfaction of visitors to the ministry's recreation sites and trails.

Resource Planning

The objective of the resource planning subprogram is to ensure that all resource values are fully considered and, to the extent possible, integrated in forest and range resource management plans. Plans are currently prepared in cooperation with other provincial ministries, and with input from resource users and the public. To improve this process, the ministry will be establishing interagency planning committees at the forest district level, with provision for participation by the full spectrum of resource users.

The subprogram includes the preparation of broad resource management plans for timber supply areas (TSAs), the review of management plans prepared by the forest industry for major licences, and preparation of more detailed resource use plans at the watershed level. The ministry's use of sophisticated, computerized geographic information systems (GIS) is being expanded to the district level, with support from the Inventory Program, to help improve planning for all resources.

Inventory Program

The Inventory Program maintains a comprehensive inventory of British Columbia's timber resources, and combines it with range and recreation inventories from the Integrated Resource Management Program. It provides computerized maps and geo-referenced database to resource managers throughout the ministry, outside agencies and the private sector.

Inventory Program goals for the next five years include:

* reinventory of 50% of the Province's forests (over 3000 maps);
* two updates for the whole Province of timber harvest areas;
* reconciliation of the annual timber harvests with the areas and volumes in the timber inventory;

The program includes the activities of the Inventory Branch in Victoria and inventory personnel at the region and district levels. The private sector is used extensively for surveys, data compilation and mapping. Specialized computer software developed by two British Columbia companies is used for many forestry analyses..

Forecast expenditure for 1990/91 is $15 million.

Harvesting Program

The Harvesting Program includes the disposition of timber, and administration of timber harvests, under a variety of forest tenures; the collection of revenues for Crown timber; and, the administration of the Forest Service road network. It also encourages industry to utilize the full potential of the timber available for harvesting, to meet world market demands and take advantage of emerging opportunities.

On March 31, 1990, the allowable annual cut (AAC) on "regulated" Crown and private forest lands was just under 75 million m^3. Most of this volume is committed to major licences, administered under the Harvesting Program, with the balance administered under the Small Business Forest Enterprise Program, described below.

Individual major licences are permitted some flexibility in harvest rates, to permit the licence holder to respond to market conditions. The licensee may vary annual harvest volumes by plus or minus 50% of the licence's AAC but, in the interests of community stability, is required to be within 10% of the cumulative AAC for a predetermined five year period. The ministry may recover uncut volumes below the minimum levels, known as undercuts, for disposition to other licensees. Consistent undercutting may result in a permanent reduction of a major licence's AAC.

The Ministry of Forests does not control the rate of harvest from federal, most private and other "unregulated" lands. Annual harvests from these lands have fluctuated between 4 and 14 million m^3 in the last decade.

In Victoria, the Harvesting Program includes the activities of the Timber Harvesting, Valuation and Industry Development Branches. At each of the region offices, it includes the activities of timber administration, engineering and valuation personnel. At the district level, the program includes the activities of personnel for timber administration, scaling and engineering.

Forecast expenditure for 1990/91 is $58 million. Forecast revenue is $475 million from timber sales plus $91 million from other direct forest revenues.

Small Business Forest Enterprise Program

The Small Business Forest Enterprise Program (SBFEP) sells Crown timber to firms and individuals throughout the Province. At present, about 2,500 firms and individuals are registered in the SBFEP and are eligible to compete for timber sales.

Timber is sold in three main ways:

* Competitive Sales (section 16 of the **Forest Act**): These sales are sold to the highest bidder. A lower limit price, called the upset price, is established and interested parties then tender an additional amount, called the bonus bid. The bidder with the highest bonus bid is awarded the sale. These sales are usually for a term of one or two years.

* Bid Proposal Sales (section 16.1 of the **Forest Act**): These sales are awarded to the firm which submits the best proposal. Proposals are evaluated to determine the value added by the applicant's manufacturing facility. The sale is awarded to the applicant with the best combination of bonus bid and value added. These sales have terms ranging from two to ten years.

* Direct Sales (section 18 of the **Forest Act**): These sales are awarded directly, without competition. Direct sales are used for emergency situations, small volumes and small replaceable timber sale licences. These sales usually have short terms.

Bid proposal sales are an important aspect of the SBFEP. Through these sales, the government is encouraging the remanufacture of lumber and the production of specialty products. Expansion of this part of the forest industry will provide additional employment opportunities, and will lead to diversification into new products and markets. As of March 31, 1990, 40 bid proposal sales, with a total volume of 5.3 million m^3, have been awarded.

The SBFEP is managed on a self-financing basis. All revenues from the sale of timber flow into the Small Business Forest Enterprise Account. The ministry draws money from the account to administer the program, construct roads for future timber sales, and to reforest harvested areas. In 1990/91 the SBFEP budget is as follows:

Administration	$17 million
Harvesting	
Sales	$ 9 million
Roads	$24 million
Silviculture	$23 million
Protection	$ 1 million
TOTAL	$74 million

The revenue forecast for 1990/91 is $150 million.

During 1990/91, the ministry expects to award approximately 50 bid proposal sales. In addition, about 1,500 competitive and direct sales will be awarded. In total, approximately 12.5 million m^3 are expected to be sold during the year.

Silviculture Program

The Silviculture Program sets and monitors standards of reforestation on Crown and regulated private forest lands, reforests certain types of denuded Crown forest land, improves the value and productivity of the forest resources, and provides tree seed and seedlings.

The Silviculture Program includes the activities of the Silviculture Branch in Victoria and the silviculture personnel at the regions, districts, three nurseries, nine seed orchards and the Province's seed centre.

Forecast expenditure in the Silviculture Program in 1990/91 is $245 million. The funding for the Silviculture Program consists of:

Forest Renewal	$213 million
Administration	$29 million
South Moresby Implementation - Forest Replacement	$3 million
TOTAL	$245 million

Additional silviculture expenditures administered by Silviculture Program personnel are made under the SBFEP and the Forestry Enhancement Program, funded by the Ministry of Social Services and Housing.

The Silviculture Program consists of three subprograms: basic silviculture, incremental silviculture, and nursery and seed operations.

Basic Silviculture

Basic silviculture includes all activities that ensure reforestation of recently denuded areas with commercially useful trees. The basic silviculture subprogram sets and monitors standards of reforestation following current timber harvests on Crown and regulated private forest lands. It also funds and administers restocking of forest areas denuded by fire, pests and recent timber harvesting. Activities include surveys, site preparation, planting, brushing and spacing.

Responsibility for funding basic silviculture activities was shifted to major licensees and the SBFEP in 1987. The Silviculture Program still funds all basic silviculture on land harvested by major licensees between January 1, 1982, and September 30, 1987; land harvested by small business and other minor tenures up to December 31, 1987; and, land denuded by fire and pests. It also funds brushing and spacing of stocked plantations on land harvested prior to January 1, 1982. Aside from some residual brushing and spacing, and an ongoing requirement to restock land denuded by fire and pests, the reforestation activities under the basic silviculture subprogram will be largely completed with the goals shown in the following table:

Goals for Basic Silviculture Funded by the Ministry

	1990/91	1991/92	1992/93	1993/94	1994/95
	(hectares)				
Surveys	416 000	384 000	341 000	290 000	270 000
Site Preparation	45 000	38 000	25 000	18 000	14 000
Planting	87 000	56 000	45 000	22 000	16 000
Brushing	67 000	69 000	67 000	57 000	54 000
Spacing	13 000	18 000	21 000	23 000	27 000

Major licensees are required to restock at their own cost areas harvested as of October 1, 1987, following a prescription and schedule approved by staff under the Silviculture Program. The ministry's role is to monitor and audit their performance.

Incremental Silviculture

The incremental silviculture subprogram includes activities to restock the backlog of not satisfactorily restocked (NSR) forest land, and to improve the value and growth of immature forests. Activities include surveys, site rehabilitation, backlog planting, brushing, conifer release, spacing and fertilizing.

During the past five years, funding for incremental silviculture was provided primarily under the Canada-British Columbia Forest Resource Development Agreement (FRDA), which ended March 31, 1990. As discussed in Part 2 of this report, negotiations for a new agreement to replace FRDA are under way. Estimated incremental silviculture goals for this and two other sources of funding in 1990/91 are shown in the following table:

Goals for Incremental Silviculture in 1990/91

	Replacement for FRDA	South Moresby Implementation	Forestry Enhancement
	(hectares)		
Surveys	272 000	2 600	0
Site Rehabilitation	24 000	0	0
Backlog Planting	32 000	0	0
Brushing	13 000	100	3 000
Conifer Release	0	0	800
Spacing	0	1 830	2 000
Fertilizing	0	2 000	0
Other	0	0	2 000

The goals for the replacement for FRDA are based on planting seedlings that are already growing in nurseries, and on protecting investments in plantations established under FRDA.

The South Moresby Implementation - Forest Replacement special account was established in 1988, to fund incremental silviculture activities to help offset the loss of commercial timber in the South Moresby National Park Reserve.

The Forestry Enhancement Program provides employment and training. The preliminary goals shown will be adjusted to reflect funding by the Ministry of Social Services and Housing and projects proposed by sponsors outside government.

Nursery and Seed Operations

The nursery and seed operations subprogram manages three nurseries and several seed orchard sites to produce genetically improved seed and tree seedlings. For all seedlings planted on Crown land, seed from seed orchards and natural stands is collected, registered and stored at the ministry's new seed centre in Surrey. Since 1987, the forest industry pays for seed and seedlings.

The ministry and the private sector will continue to manage seed orchard facilities to produce genetically improved seed. By the year 2000, the orchards will supply seed for an estimated 40 million and 80 million seedlings, respectively, for coastal and interior planting,

The three ministry nurseries provide seedlings for the SBFEP and other ministry needs. The remainder of the seedlings planted in the Province are grown in private sector nurseries.

The subprogram also provides extension services to private sector seed orchards, nurseries and reforestation efforts. Services include testing of cones, seeds and seedlings; sowing request coordination; and, providing support for nursery and seed orchard management.

Research Program

The Research Program provides the ministry with the scientific knowledge and improved technology for achieving forest resource management objectives. The program works in cooperation with other research agencies, industry and the Province's universities and technical institutes.

A broad goal for the next five years is to direct new research to help solve challenging issues in integrated resource management, silvicultural systems (e.g. clearcutting and selective cutting), hardwood silviculture, and forest growth and yield. Renewed emphasis will be placed on communicating research findings and other technical information in a timely and effective manner.

Some past and ongoing examples of Research Program outputs are: genetically improved trees for seed orchards, nursery practices to improve seedling quality and growth, forest establishment and maintenance treatments to reduce regeneration costs and achieve free growth more rapidly, guidelines for integrating timber harvesting with other forest uses, ecological maps and training materials for sound management prescriptions, managed stand growth and yield tables, and models for strategic forest planning.

The program includes the activities of the Research Branch in Victoria, and research personnel at the region offices, three research stations and a laboratory. Activities include research, communication and extension services.

Forecast expenditure for 1990/91 is $13 million. In addition, the Research Program may administer research for the Silviculture Program, using funds under a replacement agreement for FRDA.

Protection Program

The Protection Program reduces damage to forest and range resources by wildfire and forest pests. Protection of private property, improvements, and human life are especially important in wildland/urban interface areas. Maintenance of diverse environmental values is also provided through forest protection.

The overall goals are to keep the area burned by wildfire below 69 000 ha and the timber volume lost to to wildfire below 2.6 million m^3 annually.

The program includes the activities of the Protection Branch in Victoria, and protection personnel at the region and district offices. Forest health activities are coordinated with the activities of the Silviculture, Harvesting and Small Business Forest Enterprise Programs. The program also establishes standards for, and manages, the ministry's aviation and associated support activities to ensure that these are safe and cost-effective.

Aside from the lives saved by this program and the related Fire Suppression Program, the commercial values protected by these programs are substantial: Developments in the wildland/urban interface areas are worth $15 billion; the forest industry produces goods worth about $13 billion annually and supports 250,000 direct and indirect jobs. Without protection from wildfires, many of the interface developments would be lost and about 25 to 50% less timber would be available to the forest industry and associated manufacturers.

Bark beetles and other pests are still damaging forests and rangelands over widespread areas of the Province. Control and management efforts will continue in 1990/91, with priority given to the mountain pine beetle. Other efforts include the establishment of disease-free young stands, to improve their growth rates and wood quality, and control of vertebrate pests.

Forecast expenditure for 1990/91 is $18 million.

Fire Suppression Program

The Fire Suppression Program provides fire-fighting services for the control of wildfires. The program is closely linked to, and supported by, the Protection Program, but is managed and funded separately.

Program expenditure depends on the severity of the fire season. Contracts for air tankers, helicopters, and heavy equipment and fire fighter wages are the main expenses.

Recent initiatives in the fire suppression program include the use of highly-trained 20-person "unit crews", and the movement of personnel and equipment to high risk areas in anticipation of potential fires. Supporting much of the fire suppression efforts are high-technology lightning detectors, remote automated weather stations, and advanced computer information systems.

Forecast expenditure in 1990/91 is $50 million.

MANAGEMENT SERVICES PROGRAM

The Management Services Program provides the ministry's basic infrastructure. This includes the minister's office, all senior managers, and the ministry's administrative, financial, personnel, computing, technical and mechanical services.

At headquarters in Victoria, the program includes senior management and the activities of the Audit Services, Financial Services, Human Resources, Information Systems, Legal Services, Policy and Planning, Public Affairs, and Technical and Administrative Services Branches. At the region and district offices, it includes senior management and the activities of administrative and technical support personnel.

Forecast expenditure for 1990/91 is $99 million.

THE ROLE OF THE PRIVATE SECTOR

Wherever possible, the Ministry of Forests engages the private sector to assist in implementing programs approved by the government. While the role of the private sector may continue to increase, government, through the ministry, will continue to manage and control the Province's forest and range resources.

The private sector is directly responsible for many activities, such as planting after timber harvests under certain forest tenures. The ministry sets standards and monitors performance.

The private sector also carries out many activities under contract to the ministry: It reforests denuded areas which the ministry is required to reforest; provides communications, computing and other services which help the ministry operate efficiently; and, performs a variety of other tasks, such as mapping and research, which help the ministry carry out its mandate. The ministry monitors the performance of its private sector contractors.

Part 4: SUMMARY

The Province's forests and rangelands provide a vital basis for the thriving economy and high quality of life enjoyed by British Columbians. The mandate of the Ministry of Forests is to manage the forests and rangelands for sustainable development -- to maintain both economic vitality and a healthy environment for present and future generations.

In implementing sustainable development , the ministry attempts to balance and integrate the interests and values of all British Columbians. Consultation with other agencies and the public is therefore an important aspect of the ministry's programs.

One example of the ministry's commitment to sustainable development is its active promotion of forest renewal to ensure timber supplies for future generations. Another is the ministry's commitment to stewardship of all forest resources, including range, old growth, wilderness, commercial timber, scenic landscapes, wildlife habitat and watersheds.

The ministry also encourages the Province's forest industry to be competitive on world markets and produce more value-added products -- thereby providing stable and increased employment, as well as revenues.

The Ministry of Forests' forecast expenditure for 1990/91 is $590 million, consisting of $491 million for the Forest and Range Resource Program, and $99 million for the Management Services Program. Total direct revenues from the forests are forecast at $716 million for 1990/91. The ministry's forest and range management also maintains the natural resources from which the forest, ranching and tourism industries generate additional corporate and personal tax revenues. These direct and indirect revenues help pay for the social services provided to all British Columbians.